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? WHY THE WEATHER ? Mailed October 6, 1931

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AN EFFECT OF HUMIDITY

The humidity of the air has a great variety of practical relations to commerce and industry, many of which are unfamiliar to the persons most concerned. Some of these are discussed in a recent article by W. F. McDonald, of the U. S. Weather Bureau, dealing with the commercial aspects of the climate of New Orleans.

At that port granulated sugar, in bags and packages, cakes badly and the caking is worst in winter, despite the fact that the amount of moisture in the air--the absolute humidity--is less than in summer. "The cost of handling and regranulating spoiled packages," says Mr. McDonald, "was sufficiently serious to set several of the large sugar companies to a scientific investigation. This showed that the sugar caked most seriously, not when the humidity remained steadily high, but when high humidity was followed by a spell of abnormally dry weather. Such variations can occur at New Orleans only with the alternation between warm and cold wave type conditions characteristic of the colder part of the year.

"The explanation appears to be something like this: High absolute humidity increases the natural moisture film on the sugar grain to an extent that may reach the point of some coalescence between particles in contact. The drying attending a few days of unusually low humidity then results in some recrystallization of this sugar film, which cements the granules into a caked mass."

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